

**Commonwealth of Kentucky**  
**Division for Air Quality**  
***PERMIT STATEMENT OF BASIS***

TITLE V DRAFT/PROPOSED PERMIT NO. V-99-010

PCI INCORPORATED

WURLAND, KY.

JUNE 1, 2000

THOMAS ADAMS, REVIEWER

PLANT I.D. # 103-1540-0032

APPLICATION LOG # F800

**SOURCE DESCRIPTION:**

PCI is applying to operate an existing facility to manufacture pigment feedstock. Urea, Phthalic Anhydride and Cuprous Chloride are reacted in a solvent in six batch reactors. After the reaction cycle is completed, material is decanted, washed, filter pressed and dried.

Ammonia is produced as a byproduct of the reaction. Reaction solvent is lost during the drying process. A condenser and carbon bed adsorber are used to recover solvent. Ammonia and solvent emissions are control by a low NOx afterburner system (Noxidizer).

**COMMENTS:**

*Applicable Regulations:* The source is major for Title V (1,2,4-Trichlorobenzene) and a synthetic minor for SO<sub>2</sub> emission and minor for all other pollutants for 401 KAR 51:017 (PSD) purposes.

The source is subject to:

1. Regulation 401 KAR 59:015 New indirect heat exchangers
2. 40 CFR 60 Subpart Dc as adopted by Regulation 401 KAR 60:043; Standards of performance for small industrial-commercial-institutional steam generating units.
3. Regulation 401 KAR 59:010 New process operations
4. Regulation 401 KAR 63:021 Existing sources emitting toxic air pollutants.

*Emission factors:* Emission factors for small combustion device and material handling equipment are based on AP-42. Emissions factors from the fugitive sources and Noxidizer are based on compliance testing.

*Compliance periods:* HAP/VOC compliance is based on an averaging period of three hours.

**EMISSION AND OPERATING CAPS DESCRIPTION:**

The division has determined that the source does not have the potential to exceed the PSD major source thresholds. This was an issue of public concern and comment when the original construction permit was issued. In response to public comments and a public hearing, several production "limitations" were included in the construction permit that were brought forward into the Title V permit.

PCI, Incorporated is a PSD minor source because of potential emission from the combustion of fuel oil in the burner systems. The source is not currently burning fuel oil.

**PERIODIC MONITORING:****PM/PM10**

For small fabric filters for process units, monitoring of the smaller units is to consist of a weekly check and log of pressure drops. For the large pulse jet that controls the dryers, blenders and production equipment, continuous monitoring is done on the inlet temperature and pressure drop across the baghouse. In addition, there is a “break through” monitor on the baghouse that indicates bag failure.

**NO<sub>x</sub>**

There are no add-on controls for NO<sub>x</sub>, but the Noxidizer is monitored to assure destruction of Ammonia and that excessive NO<sub>x</sub> is not being formed. For this the first stage combustion temperature and O<sub>2</sub> outlet concentration are monitored.

**HAPs (1,2,4-Trichlorobenzene and PCB)**

Process Trichlorobenzene emissions are controlled by the Noxidizer and carbon bed adsorber. The following are monitored: the inlet and outlet temperatures of the adsorption system, pressures drop across the carbon adsorption system, first stage combustion temperature of the ammonia thermal oxidation system, O<sub>2</sub> outlet concentration of the ammonia thermal oxidation system and HCl outlet concentration of the ammonia thermal oxidation system.

**HAPs (Dioxin)**

Dioxin is formed as a by-product of combustion. To minimize formation, combustion temperature and HCl outlet concentration of the ammonia thermal oxidation system is being monitored. The source will also be subject to periodic testing.

**CREDIBLE EVIDENCE:**

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.